IN THE CLAIMS:

Please cancel claims 1-68, and add new claims 69-96 as follows.

69. (New) A chimeric peptide comprising:

a peptide having a first portion and a second portion, wherein the carboxyl terminus of the first portion is linked to the amino terminus of the second portion; and,

wherein the first portion is from the free N-terminus of a naturally-occurring internal peptide cleavage product which, when naturally-occurring in a mammal, is derived from a precursor protein or a mature protein and the second portion comprises a T helper cell epitope; or,

wherein the first portion comprises a T helper cell epitope and the second portion is from the free C-terminus of said naturally-occurring internal peptide cleavage product.

70. (New) The chimeric peptide according to claim 69, wherein said internal cleavage product is an amyloid β peptide, which when naturally-occurring, is derived from cleavage of β amyloid precursor protein (βAPP).

71. (New) The chimeric peptide according to claim 70, wherein said internal peptide cleavage product has an amino acid sequence selected from the group consisting of Aβ1-39, Aβ1-40, Aβ1-41, Aβ1-42, and Aβ1-43.

72. (New) The chimeric peptide according to claim 69, wherein the first portion is Aβ1-3, Aβ1-4, or Aβ1-5 from the free N-terminus of said internal peptide cleavage product.

73. (New) The chimeric peptide according to claim 69, wherein the first portion is Aβ35-40 or Aβ35-42 from the free C-terminus of said internal peptide cleavage product.

74. (New) The chimeric peptide according to claim 69, wherein said T helper cell epitope binds to multiple MHC molecules.

75. (New) The chimeric peptide according to claim 69, wherein said T helper cell epitope is derived from tetanus toxoid, diphtheria toxoid, hepatitis B surface antigen, Malaria CS, *E. coli* toxoid, or a toxoid from other pathogenic bacteria.

76. (New) The chimeric peptide according to claim 75, wherein said T helper cell epitope has an amino acid sequence selected from the group consisting of SEQ ID NO: 45, SEQ ID NO: 46, SEQ ID NO: 49, and SEQ ID NO: 50.

77. (New) An immunogenic composition, comprising an immunogenically effective amount of the chimeric peptide according to claim 69 and a pharmaceutically acceptable carrier, excipient, diluent, or adjuvant.

78. (New) The immunogenic composition according to claim 77, wherein said adjuvant is alum.

79. (New) A method for immunization against the free N-terminus or free C-terminus of an internal self peptide cleavage product derived from a precursor protein or a mature protein, comprising administering to a mammal the immunogenic composition according to claim 78, for which the internal peptide cleavage product is a self molecule of the mammal.

80. (New) The method according to claim 79, wherein the mammal is a human.

81. (New) The method according to claim 80, wherein the internal self peptide cleavage product is an amyloid β peptide, which when naturally-occurring, is derived from cleavage of β amyloid precursor protein, whereby said method raises antibodies specific to the free N-terminus and/or free C-terminus of the amyloid β peptide.

82. (New) A chimeric peptide represented by formula (I) or formula (II),

(I) $N\text{-}(S)_m\text{-}(T_h)_n$

(II) $(T_h)_n\text{-}(S)_m\text{-}C$

or chimeric peptides which are mixtures of formula (I) peptides, mixtures of formula (II) peptides, or mixtures of formula (I) and formula (II) peptides, wherein:

N is the first 2, 3, 4, or 5 amino acid residues from the free N-terminus of a naturally-occurring internal peptide cleavage product which, when naturally-occurring in a mammal, is derived from a precursor protein or a mature protein;

C is the last 2, 3, 4, or 5 amino acid residues from the free C-terminus of said naturally-occurring internal peptide cleavage product;

T_h is a T helper cell epitope;

S is a spacer amino acid residue;

m is 0, 1, 2, 3, 4, or 5; and

n is 1, 2, 3, or 4.

83. (New) The chimeric peptide or peptides according to claim 82, wherein said internal peptide cleavage product is an amyloid β peptide, which, when naturally-occurring, is derived from cleavage of β amyloid precursor protein (βAPP).

84. (New) The chimeric peptide or peptides according to claim 83, wherein said internal peptide cleavage product has an amino acid sequence selected from the group consisting of SEQ ID NOs:2, 3, 4, 5, 6, 7, and mixtures thereof.

85. (New) The chimeric peptide or peptides according to claim 82, wherein N is the first 2 or 3 amino acid residues from the free N-terminus of said internal peptide cleavage product.

86. (New) The chimeric peptide or peptides according to claim 82, wherein C is the last 2 or 3 amino acid residues from the free C-terminus of said internal peptide cleavage product.

87. (New) The chimeric peptide or peptides according to claim 82, wherein T_h is promiscuous T helper cell epitope.

88. (New) The chimeric peptide or peptides according to claim 87, wherein said promiscuous T helper cell epitope is derived from tetanus toxin, pertussis toxin, diphtheria toxin, measles virus F protein, hepatitis B virus surface antigen, *Chlamydia trachomatis* major outer membrane protein, *Plasmodium falciparum* circumsporozoite, *Schistosoma mansoni* triose phosphate isomerase, or *Escherichia coli* TraT.

89. (New) The chimeric peptide or peptides according to claim 88, wherein said promiscuous T helper cell epitope has an amino acid sequence selected from the group consisting of SEQ ID Nos:8 to 27.

90. (New) An immunizing composition, comprising an immunizing effective amount of the chimeric peptide or peptides according to claim 82 and a pharmaceutically acceptable carrier, excipient, diluent, or auxiliary agent.

91. (New) The immunizing composition according to claim 90, wherein said pharmaceutically acceptable auxiliary agent is an adjuvant.

92. (New) The immunizing composition according to claim 91, wherein said adjuvant is alum.

93. (New) A method for immunization against the free N-terminus or free C-terminus of an internal self peptide cleavage produce derived from a precursor protein or a mature protein, comprising administering to a mammal the immunizing composition according to claim 91, for which the internal peptide cleavage product is a self molecule of the mammal.

94. (New) The method according to claim 93, wherein the mammal is a human.

95. (New) The method according to claim 94, wherein the internal self peptide cleavage product is an amyloid β peptide, which when naturally-occurring, is derived from